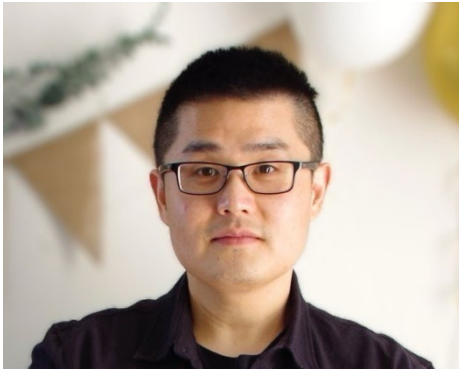


# *Computer Vision at the Edge powered by Qualcomm*



Shuai Zhang

## *Shuai Zhang*

Senior Staff Engineer and  
Manager in the Multimedia  
group

## *Xiao Hu*

Senior Engineer in the  
Multimedia CV R&D team  
Qualcomm



Xiao Hu

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### **Abstract**

Qualcomm is powering AI-driven multimedia at the edge, especially computer vision. This talk will explore the advancements and applications of Qualcomm's computer vision technologies across various domains, including mobile, XR, smart glasses, IoT, and compute. We will delve into the widely adopted detection and segmentation solutions in mobile devices, as well as emerging technologies and LLMs. Additionally, we will highlight Qualcomm's efforts in developing robust tools and platforms to support a thriving developer ecosystem on Qualcomm devices.

### **Bio**

Shuai Zhang is a Senior Staff Engineer and Manager in the Multimedia group at Qualcomm, specializing in Edge AI, including segmentation, foundation models, multi-modality AI. He earned his Ph.D. in Mathematics from the University of California, Irvine in 2017. At Qualcomm, Shuai led the development of the Segmentation-based Cognitive ISP, which earned the 2023 Edge AI and Vision Product of the Year Award. In 2024, the new "Limitless Segmentation" solution was showcased as a key feature at the Qualcomm Summit, generating 47K Google search results by October 29, 2024. His research has led to 18 granted patents and 24 published papers in top journals and conferences.

Xiao Hu is a senior engineer in the Multimedia CV R&D team, specializing in low-power computer vision. His expertise includes face attributes analysis and on-device deployment. Xiao earned his M.S. in Electrical and Computer Engineering from Purdue University in 2022, under the mentorship of Professor Yung-Hsiang Lu. He has contributed significantly to the field with 17 publications in esteemed conferences and journals, including a chapter for the book "Low-Power Computer Vision: Improve the Efficiency of Artificial Intelligence".

### **Host**

Yung-Hsiang Lu, [yunglu@purdue.edu](mailto:yunglu@purdue.edu)



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